Quadratics: Finding the Vertex Point

The vertex of a parabola is the maximum or minimum point. Always written as an ordered pair.

To calculate the vertex (without the calculator) use the following formulas:

$$\text{X-value} = \frac{-b}{2a}$$

$$\text{y-value} = c - \frac{b^2}{4a}$$

$$\text{Vertex} = \left(\frac{-b}{2a}, c - \frac{b^2}{4a}\right)$$

Ex: Find the vertex of $y = -2x^2 + 3x + 2$

Show work — No calc.

$$\text{vertex} = \left(\frac{3}{4}, \frac{25}{8}\right)$$